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ABSTRACT

A report described the current context, realities, and research and development needs of local level vocational education planning to provide a foundation for improving local level planning technology. Examination of the legislative context for vocational education planning revealed that interagency coordination and consultation, use of data about job availability and student and community needs, and consideration of evaluation findings are key ingredients in the planning process. Organizational design, funding, and goals; local regulations; enrollment patterns; and community economic and demographic characteristics are among environmental factors affecting educational planning. A sample of planning tools and techniques and training material and activities was derived by examining discrepancies between federal legislative intent for vocational education planning and the observed realities of local level vocational education planning as it takes place under diverse environmental conditions. These tools and techniques include models and procedural guides to assist local school administrators and planners, models and procedural guides to facilitate statewide coordination between state and local level agencies, techniques to define new and emerging job skills needed for changing technologies, improved information systems for use by local schools, and competency-based training materials for individuals and/or group instruction to enhance planning skills. (MN)

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IMPROVING THE TECHNOLOGY OF LOCAL LEVEL VOCATIONAL EDUCATION PLANNING

Context, Realities, and Research and Development Needs

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FOREWORD

Comprehensive planning has been identified as an essential ingredient in the efforts of local schools to increase the responsiveness of vocational education. This report describes the reality of comprehensive vocational education planning as it occurs in a wide variety of educational and environmental contexts, and suggests ways that have the potential for improving the technology of vocational education planning.

This report is the result of fieldwork observations in 1980 in the states of Wisconsin, West Virginia, Florida, and Oklahoma and dialogue sessions conducted in these states and in Colorado, Texas, Georgia, and Kansas during the preceding year.

Special appreciation is extended to Dr. Mary Ellis, President, Ellis Associates; Dr. Gil Cardenas, Associate Professor, Pan American University; and Dr. James Hale, Associate Professor, University of Florida who provided methodological assistance to staff. Thanks are also due to Harold Sullivan, Associate Director, Administration and Planning, Bureau of Vocational-Technical and Adult Education, West Virginia, and Dr. Dan Koble, Director of Occupational Education, Putnam/Northern Westchester BOCES, New York for their expert review of the content of this report.

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Robert E. Taylor
Executive Director
The National Center for
Research in Vocational Education

EXECUTIVE SUMMARY

Program staff visited a number of local secondary and postsecondary schools, and community-based organizations that are concerned with training for the world of work. On-site observations and dialogue sessions contributed to an understanding of the current realities of vocational education planning.

The report identifies the legislative and environmental contexts under which local vocational education planning takes place and notes context conditions which affect such planning. The context conditions serve as a background for descriptions of the nature of interagency coordinative and collaborative relationships in support of planning, for ways that data and evaluation are used in local planning, and for local level planning processes. The last section of the report lists planning tools and techniques, and training materials and activities whose development can potentially improve the technology of local vocational education planning and capacitate the skills of persons who do this planning.

INTRODUCTION

One of the four themes for the National Center for Research in Vocational Education is that of increasing vocational education's responsiveness through comprehensive planning. Comprehensive planning is a requisite for improving the access to, performance, and outcomes of vocational education for client groups, and for improving programs and services. Comprehensive planning requires (a) the application of appropriate and best available demographic, employment, and educational data; (b) the involvement of the broadest range of groups, agencies, institutions, and individuals concerned with vocational education and training; and (c) the application of the most appropriate planning practices, tools, and techniques.

This report describes current realities of vocational education planning as it exists at the local level. Two kinds of activities provided the basis for the findings contained in this report. The study team reviewed state and local planning documents and visited local secondary and postsecondary schools, other agencies, and community-based organizations that are concerned with training for the world of work. Observations were made of decision makers in action, and numerous dialogue sessions with school administrators and other persons were conducted by the study team.

The first section of this report, The Context for Vocational Education Planning, describes major context conditions that affect vocational education planning at the local level.[1] The second section of this report, The Realities of Local Level Vocational Education Planning, summarizes (a) the nature of interagency coordinative/collaborative relationships in support of planning; (b) the ways in which data are used in local planning; (c) evaluation procedures used in local planning; and (d) local level planning processes. Suggestions for improving the technology of vocational education planning are presented in the last section of this report.

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[1] For a discussion of major issues on vocational education planning which arise from the legislative and environmental contexts under which vocational education operates, see: Harold Starr et al., *Conditions Affecting Vocational Education Planning—Implications for Administration and Research* (Columbus, OH: The National Center for Research in Vocational Education, 1981).

THE CONTEXT FOR VOCATIONAL EDUCATION PLANNING

The Legislative Context

Federally legislated planning requirements in vocational education began with the passage of the Smith-Hughes Act. Planning requirements have become an increasingly visible aspect of vocational education legislation. This fact is especially evident in the most recent federal requirements for vocational education contained in the Education Amendments of 1976. These Amendments stress the need to improve vocational education planning in order for vocational education to be more responsive to the needs of individuals for job skills, to the needs of employers for trained workers, and to the vocational education needs of specially designated groups. The amendments also focus on promoting equal access to vocational education programs for both sexes.

The Education Amendments of 1976 direct the states to prepare and receive federal approval of five-year state plans for vocational education, annual program plans, and accountability reports as a condition for distributing federal vocational education funds to eligible local recipients. An integral part of the requirements for the distribution of federal funds is the need for state approval of local applications for the federal vocational education funds.

Looking at the federal legislative prescription as a framework for local vocational education planning, one notices several important characteristics:

- Coordination and consultation with other agencies and groups are considered as critical ingredients to reduce unwarranted duplication of program offerings and to make the best use of available resources.
- Data about the availability of jobs and about student and community needs are considered to be a necessary basis for determining programs and services to be offered.
- Evaluation findings are intended to be a vital ingredient of the local application process.
- The state plan for vocational education is presented as a working plan with goals that can be measured. Its provisions are intended to affect future plans and actions of both state and local educational units.

Several other aspects of the planning framework, though not as obvious, are implied. For example, success of the state plan depends on the ability of the state division of vocational education to motivate the implementation of vocational education in local secondary and postsecondary schools. The framework assumes that the goals contained in state plans represent a consensus or reflect the collective viewpoints and intentions of local applicants. Finally, while the Education Amendments of 1976 detail the minimal contents to be included in local applications for federal funds, they do not explicitly refer to local planning as such; however, planning is implied.

The Environmental Context

Planning is a mandate of law for vocational educators. However, the environment in which vocational education operates has a great deal to do with the planning that takes place. From the fieldwork, and by review of other research, the study team has identified several key context conditions that affect local vocational education planning:

- There is extreme diversity in the organization, funding, philosophy, and goals among local institutions offering vocational education. This is true both within and among states. As a result, it is misleading to think of "a vocational education system."
- Although there are many federal regulations affecting vocational education, most of the key decisions with regard to the implementation of vocational education programs are made locally. The role of state divisions of vocational education is usually limited to consultation and technical assistance in many aspects of vocational education planning.
- The bulk of vocational education enrollment is in nonspecialized institutions—secondary and postsecondary schools—which offer both academic and occupational programs. Within these institutions, vocational administrators frequently function in staff roles, with varying degrees of authority over decisions about vocational education programs.
- Variations in the economic and demographic stability of communities affect the style of vocational education planning. Areas experiencing dynamic growth adopt different planning goals and activities than communities in more stable situations.

THE REALITIES OF LOCAL LEVEL VOCATIONAL EDUCATION PLANNING

The study team visited a number of secondary and postsecondary schools that offer vocational education. Community-based organizations and other institutions and agencies concerned with vocational education and training were also visited by the study team. Numerous planning documents supplied by these schools, organizations, and agencies were reviewed by the study team. The visits and the document review served as the basis for the following summary of planning processes, data use, evaluation practices, and coordinative/collaborative relationships in support of local level vocational education planning.

Findings About Planning Processes at the Local Level

- Relatively few local schools have a long-range institutional plan for vocational education.
- Long-range vocational education planning, when it does take place, occurs most often in conjunction with facility planning.
- The local schools do engage in numerous vocational education planning activities. However, the planning that does take place is usually not found in a written planning document. As a consequence, the planning processes and procedures that do occur in local schools are seldom, or only partially, communicated to groups or individuals outside of the school.
- Local applications for federal funds received at the state level from secondary and postsecondary schools seldom contain sufficient detail to serve as planning documents. Indeed, it is usually difficult to discern the extent or nature of local level planning simply by reviewing local applications.
- Larger secondary and postsecondary schools are more likely to have formalized planning processes and policies and are more likely to have the resources to employ staff who have expertise in planning or research. It is important to recognize that many schools offering vocational education do not employ persons with specific expertise in planning or research.
- Decisions about vocational education programs and services in many schools are often made by persons who are not vocational administrators. In local secondary education agencies, planning decisions are often finalized by building principals or by district superintendents. In postsecondary institutions, planning decisions are often finalized by presidents of the institution rather than by deans of occupational/vocational education.
- Some kinds of planning activities are more likely to occur on a regular basis; other kinds of planning activities are likely to occur sporadically. Monitoring and assessing enrollment levels and student interest in vocational programs, and determining costs and expenditures are examples of instructional program planning activities that are usually conducted on a

regular basis. Planning instructional programs and services to meet the needs of special client groups (e.g., handicapped and disadvantaged) and to ensure equal access to vocational education by both sexes are more likely to occur on an irregular basis and then usually on a "felt-need" or externally induced basis. Systematic planning that includes needs assessments as a basis for providing instruction and services to special client groups or to promote equal access is the exception rather than the rule.

Findings About the Use of Data in Planning

- Published employment data are used more as a check to verify the validity of ideas for programs. Most program implementation ideas come from informal contacts with community members. For example, ideas for new programs often come from advisory committees, business persons, or teachers. Chambers of commerce and economic development agencies provide data about incoming industries and employer needs.
- Data about student interest in vocational education programs and data about enrollments and enrollment trends have a higher priority in local level instructional program planning than do employment data.
- The use of demographic data is generally limited to planning new facilities at the local level or to determining funding eligibility at the state level. Some postsecondary institutions analyze demographic trends to determine how to target future programming. Most institutions, however, have difficulty finding and applying data about the numbers and needs of special groups such as the handicapped, displaced homemakers, and limited-English proficient.
- Economic and financial data appear to be underutilized in vocational education planning.[2,3] When asked to describe the kinds of information used in vocational education planning, few vocational administrators mentioned cost data. Those who did came from institutions that are highly dependent on local funding rather than on state aid, or from institutions that are having financial problems.
- When published data are used in vocational education planning, those data gathered from local sources are felt to be more useful for planning purposes than published data received from state agencies. Vocational educators feel that locally generated information is more current and more adequately reflect their needs than state-generated data. This is particulary true of employment data.
- Reservations about, or problems with data are cited primarily with reference to employment data. Vocational educators feel that substate data provided by state employment security agencies are lacking in sufficient geographic and occupational detail. In addition, it also is difficult for many vocational administrators in local schools to accept the accuracy of current and projected employment data which are available to them from state divisions of vocational education.

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[2]Alan Woodruff, *National Study of Vocational Education Systems and Facilities*, No. I (Silver Spring, MD: Institutional Development Associates, 1978), p. 165.

[3]Harold Starr et al., *Management Information Systems for Vocational Education: A National Study* (Columbus, OH: The National Center for Research in Vocational Education, 1977).

- Reliable occupational supply information is particularly hard to obtain. It is difficult for many secondary and postsecondary school administrators to predict in a reasonably accurate way just how many vocational students will actually enter the job market seeking a position related to their training. Furthermore, the output from other sectors (e.g., on-the-job training, in-migration of workers, proprietary schools, higher education programs, and so forth) is uncertain or unavailable on a regular, continuing basis.

Typical sources of data which were noted by the study team as being used in local level vocational education planning are listed in table 1.

Findings About Evaluation Practices Used for Local Planning

- Local schools evaluate educational processes and practices, program outcomes, and operations. Many smaller schools were observed by the study team to restrict their evaluation efforts to assessments of teacher performance, and to taking part in infrequently occurring state-initiated program reviews and evaluations by regional accrediting agencies.
- The study team found that process evaluations do result in changes in facilities, equipment, curriculum content, and staffing at the local level.
- Local vocational staff support the state-initiated program review process that is the primary tool used at the local level for process evaluation purposes. Local administrators feel that process evaluations help them to understand the requirements for quality vocational programs.
- Evaluations of instructional program outcomes typically focus on initial placement experiences and subsequent employment experiences of program completers. These kinds of data are now available in the vast majority of local schools visited by the study team. Data about placement and employment experiences contribute to decisions about continuing, deleting, or modifying existing vocational programs. However, placement and employment data are rarely key factors in making such decisions. For example, most program deletions reported to the study team had occurred as a result of declining program enrollments and a lack of student interest in these programs. Some of these programs offered poor employment prospects, but others had been successfully placing graduates. There are other reasons that limit the usefulness of placement data in the process of making instructional program decisions. It is very difficult to accurately interpret placement rates. For example, is 60 percent placement a poor rate for an inner-city school in an area with 12 percent unemployment, or is 80 percent placement good for a highly selective area school in a region with 4 percent unemployment? Vocational educators do not have any consistent basis for making such judgments. They feel that excessive reliance on placement data will thwart their efforts to serve more disadvantaged, handicapped, and nontraditional students who will be harder to place. There is also a question in interpreting what is an appropriate or acceptable level of training-related placement given the diverse conditions under which different schools operate vocational education. The conditions include, as examples, the characteristics and abilities of program completers, the extent of general unemployment, and wage levels offered in alternative jobs.
- A serious concern of administrators about evaluation activities is the burden it places on local school resources in terms of staff time and dollar costs. One former administrator of a large metropolitan school district reported to the study team that the annual follow-up survey cost

TABLE 1

TYPICAL SOURCES OF DATA FOUND TO BE USED FOR LOCAL PLANNING PURPOSES

Type of Information	*Planning Purposes*	*Sources of Data*
Employment (current and future needs for workers)	Making decisions about instructional program mix	• State and local employment security offices • *Occupational Outlook Handbook* (U.S. Department of Labor) • School-initiated surveys of businesses and industry • Chambers of commerce • Newspapers (want-ads) • Local advisory councils and craft committees. • Community leaders, teachers
Demographic	Planning for new facilities	• U.S. Bureau of Census reports of population characteristics • Regional planning commissions, data about housing patterns, community growth trends, and so forth • Personal knowledge of administrators or input from local advisory councils about in- or out-migration of industries • Local community organizations for information about needs of special populations, advice on potential impact of new facilities on tax rates, environment, and so on

TABLE 1
(continued)

Typical Sources of Data Found to be Used for Local Planning Purposes

Type of Information	*Planning Purposes*	*Sources of Data*
Economic	Making decisions about instructional program mix; planning new facilities; planning allocation of resources (staff and dollars)	• Estimates of local and state funds potentially available to support programs • Estimates of income from tuition (postsecondary level) • Estimates of facility and equipment costs • Current expenditure data for programs
Educational	Making decisions about instructional program mix; planning new facilities; planning instructional program support services	• Advice from educators and community leaders based on their special interests and educational philosophies • Current enrollments in existing programs • Student interest surveys • Experience and/or data about placement rates of program completers • Personnel files (teacher availability, credentials, tenure status, salaries, and so on)

NOTE: For a listing of kinds of data potentially useful for vocational education planning purposes, see Harold Starr et al., *Selecting, Analyzing, and Displaying Planning Information* (Columbus, OH: The National Center for Research in Vocational Education, 1979), pp. 107-128.

his institution an estimated $150,000. The increased time and cost of mandated evaluations have occurred at a time when the real dollar level of federal spending on vocational education has decreased.

- A general shortcoming of evaluations conducted at the local level is that they rarely deal with "big picture" questions such as–
  - What unmet needs exist?
  - How can the vocational education system become more responsive to student and employer needs?
  - What courses and programs should be taught?
  - To what extent does the total program of vocational education meet the needs of all students?
  - How can service to various segments of the student body be improved?
  - Are institutions of vocational education providing for the needs of various groups and age levels in the community?
  - Are decisions about the level and length of vocational education programs made on a consistent and rational basis?

Current evaluation practices at the local level typically focus almost exclusively on improving the quality of current instructional programs and services instead of providing data for deciding what might be done to improve the responsiveness of vocational education to its client groups.

Findings About Coordination and Collaboration for Planning

- Coordination and collaboration among vocational education agencies, and between these agencies and CETA prime sponsors, community-based organizations (e.g., community action agencies, Urban League, Opportunities Industrialization Centers)[4] and other job training agencies focus on reducing unwarranted duplication of programs and sharing curricula, facilities, and teachers. The study team did not find many instances of joint planning of future directions to better serve client groups.
- Vocational education and CETA legislation have been important in extending or formalizing the mechanics of local level coordinative and collaborative relationships for planning purposes. In some localities, locally initiated coordinative and collaborative relationships among vocational education, public and private job training agencies, and community-based organizations have existed prior to federal legislative mandates for interagency coordination.
- Effective coordination and collaboration are enhanced when there are commonalities in agencies' purposes, philosophies, and administrative policies. Differences in these factors, as well as differences in funding procedures and budget cycles, create impediments to effective interagency coordination and collaboration.

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[4]Note: The study team found that many vocational educators are unfamiliar with the part played by community-based organizations (CBOs) in the preparation of people for employment. Therefore, a supplement to this report which describes the role of CBOs has been prepared. It is titled, *Broadening the View and Vision of Vocational Education: the Part and the Promise of Community-Based Organizations.*

- Coordinative and collaborative relationships among vocational education and other agencies are seldom implemented and operated in a systematic, planned, or well-supported manner.

A more complete understanding of the nature of coordination and collaboration in vocational education can be found in a recent National Center publication.[5]

IMPROVING THE TECHNOLOGY OF VOCATIONAL EDUCATION PLANNING

This section of the report lists a sample of planning tools and techniques, and training materials and activities that might be useful for improving local level vocational education planning and for capacitating the current planning skills of many local vocational education administrators. The sample of planning tools and techniques, and training material and activities that are listed were derived by examining discrepancies between federal legislative intent for vocational education planning and the observed realities of local level vocational education planning as it takes place under diverse environmental context conditions.

Suggestions for Planning Tools and Techniques

- Models and procedural guides are needed to assist local school administrators/planners to develop multiyear institutional plans for vocational education. Alfred[6] and Van Ausdale[7] have each proposed a model for doing multiyear institutional planning for vocational education. These two proposed models were developed for use by local postsecondary institutions, and both models emphasize the integration of vocational and academic program planning. Alfred gives special emphasis to the need for involving all institutional staff in the development of multiyear planning who will be affected by such planning. He sees such involvement as critical to effective implementation of planning efforts. It is reasonable to conclude that different models for multiyear, local level vocational education planning might need to be formulated, given the differences in the kinds of local schools which offer vocational education (e.g., specialized, nonspecialized secondary, postsecondary, large, small, rural, urban) and the diverse environmental context under which such schools operate.
- Models and procedural guides are needed to assist local schools and other local agencies concerned with training persons for employment to organize and implement local and regional arrangements for coordination and collaboration to do joint planning and to make the best use of available resources for vocational education.
- Models and procedural guides are needed to enable a state division of vocational education to organize and implement statewide coordinative and collaborative arrangements among the state office, local schools, and other agencies to formulate and update state plans for vocational education. These models should (a) provide a sense of a statewide direction and

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[5]Harold Starr et al., *Coordination in Vocational Education Planning: Barriers and Facilitators* (Columbus, OH: The National Center for Research in Vocational Education, 1980). 94 pp.

[6]Richard L. Alfred, "Planning and Evaluating Vocational Education Programs in the 1980s" (Working paper prepared for The National Center for Research in Vocational Education, Columbus, OH, 1980).

[7]Steven L. Van Ausdale, *Comprehensive Institution Planning in Two-Year Colleges: A Planning Process and Case Study* (Columbus, OH: The National Center for Research in Vocational Education, 1979).

perspective to the planning done by local schools; and (b) create a climate for joint state and local planning to make the best use of available resources and achieve commonly shared objectives for vocational education and training.

- Techniques and procedures are needed to enable local vocational education administrators and planners to define new and emerging skills which are, or will be, needed by workers because of changing technologies. Baker[8] has outlined a procedure to assess the possible effects of the microelectronics revolution on vocational education. The procedure uses a Delphi process involving experts in the microelectronics field and the procedure is intended to be generalizable to other occupational areas.

- Planning information systems for vocational education need to be developed for use by local schools. Such systems need to incorporate a variety of data that are pertinent for local planning and evaluation purposes. Alternative ways of systematically generating and analyzing data to produce planning to meet the requirements of schools operating under different environmental context conditions also need to be developed. Although many schools currently operate (more or less sophisticated) management information systems (MIS), these MIS are typically intended to support monitoring and reporting functions rather than planning (and evaluation) purposes.

Needs for Training Materials to Enhance Planning Skills

- There is a need for competency-based materials that can be used for individual and/or group instruction to:

  - enhance current understandings by local vocational administrators and planners of how vocational education is affected by the political context in which it operates;
  - acquaint vocational administrators and planners with techniques that can be used for interacting with political decision makers to secure their support for vocational education;
  - inform vocational administrators and planners about data sources, selection analysis, display, and application techniques that are appropriate for vocational education planning in a variety of environmental and educational contexts.

[8]David E. Baker, "Implications of the Micro-Electronics Revolution for Vocational Education Planning" (Working paper prepared for the National Center for Research in Vocational Education, Columbus, OH: 1980).

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